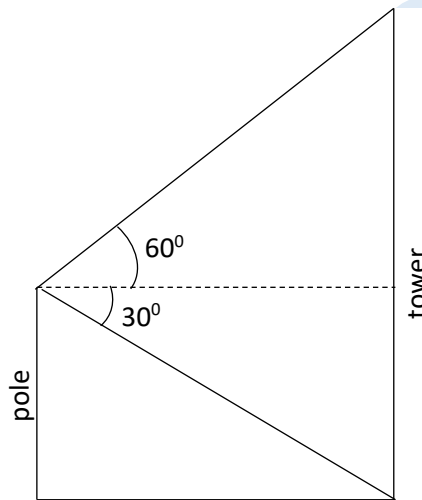


Question 6

- (i) From the deck of 52 cards, all the face cards are removed and then the remaining cards are shuffled. Now one card is drawn from the remaining deck. Find the probability that the card drawn is: [2]
- (a) 5 of red colour
 - (b) A jack of black colour.

- (ii) Find the co-ordinates of the centroid of a triangle ABC whose vertices are: [2]
A (-1, 3), B (1, -1), and C(5, 1).

- (iii) A vertical pole and a vertical tower are on the same level ground in such a way that from the top of the pole the angle of elevation of the top of the tower is 60° and the angle of depression of the bottom of the tower is 30° . Find the height of the tower, if the height of the pole is 20 m.



- (iv) Using step-deviation method, calculate the mean of the following distribution:

Class-interval	0 – 50	50 – 100	100 – 150	150 – 200
frequency	4	8	16	13
	200 – 250	250 – 300		
	6	3		